

WHAT IS CLAIMED IS:

1. A thermal treatment system for semiconductors, comprising:

an outer tube, which is made of silicon carbide, and
5 which has an upper portion closed and a lower portion opened, and has a flange formed on an outer peripheral side of the lower portion;

10 a base, which supports the lower portion of the outer tube and provides hermetic seal between the lower portion of the outer tube and the base;

a lid, which is provided so as to selectively open and close an opening formed in a central portion of the base; and

15 a reactor wall, which surrounds an outer peripheral wall and an upper wall of the outer tube and has a heater provided on an inner side;

20 wherein an annular sealing member and an annular supporting member are interposed between the outer tube and the base so that the supporting member is located around an outer peripheral side of the sealing member, and wherein the supporting member has an effective heat transfer coefficient of 50 to 2,000 W/(m²·K).

25 2. The thermal treatment system according to Claim 1, wherein the supporting member has an effective heat transfer coefficient of 50 to 1,000 W/(m²·K).

3. The thermal treatment system according to Claim 1, wherein the supporting member comprises plural members

layered in a height direction and/or a peripheral direction.

4. The thermal treatment system according to Claim 1, wherein the supporting member is made of a fluororesin
5 and/or aluminum.

5. The thermal treatment system according to Claim 1, wherein there is included an inner tube, which is provided around an inner peripheral side of the outer tube with a gap, which has upper and lower ends opened,
10 and which is made of silicon carbide.